

Mini-beast Safari

Mini-beast Safari is a set of activities designed to raise awareness of the wonderful world of small creatures. The suggested activity list is for guidance only and you may pick and mix the activities to fit your needs.

The Camp

Setting the scene and introducing the activities You will need: A pleasant spot to set up base near to a pond and some trees, something to sit on if it is damp and a whistle.

How to do it:



1. Tell the group:

- You are going to go on safari to view mini-beasts. You will be visiting the "Invertebrata National Park" and looking at 3 different mini-beast reserves. The park is known as the "Invertebrata" as mini-beasts belong to a family known as the Invertebrates. This means that they have no backbones.
- Mini-beasts tend to be shy and retiring. If you have to take the roof off one of their homes to see them, make sure you put it back afterwards.
- Mini-beasts are delicate and easily hurt and should be handled with care. One or two mini-beasts may nip. However, most of them only tickle and none of them kill people (in this country!!) Please use post where possible.
- The spot you are in is "The Camp" and you should report back to Camp after all activities and whenever you hear the whistle.
- You are now going on a tour of the Invertebrata National Park.

2. The work area

• Take them on a tour of the boundary of the area they are to work in.

Talk about:

- The Invertebrata National Park may seem small to them but to a mini-beast it is infinitely large.
- They will be looking at 3 reserves in the park (or less if needed):
 Reserve 1 the pond Reserve 2 The ground and Reserve 3 the trees
- Safety issues see Safety in Groups Guidelines
- Water safety management
- Hygiene of sharing pooters
- Collecting mini beasts use lids, not hands where possible
- Do not put hands near to mouths

Colliers Wood

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Fishing

Pond dipping and identifying pond mini-beasts

Each small group will need: A net, white tray, magnifying glass, clip board, pencils, Freshwater Name Trail Guide and **mini-beast record sheets**. This activity should take place at the pond. Refer to the suggested lesson plan for a more

in depth activity.

How to do it:

1. Introduce the activity

- Remind the group about water safety.
- Divide the group up into pairs or threes.
- Half fill each white tray with water.

2. Fishing Boat

- In pairs or threes work as Fishermen on a fishing boat.
- Hand out the trays to the Fishermen.
- Take it in turns in the team to sweep the net in one direction through surface water.
- Have a go and then...

3. Swap roles

• The second Fisherman should sweep the net a little deeper through the water taking care not to touch the bottom and empty the net into the tray.

4. Mini-beasts can then be recorded by:

- The under 7s counting the different types of mini-beast.
- 7-11 year olds using the tick list.
- the 11s and over using the Freshwater Trail Guide and record sheet.

5. An adult should empty out the trays by lowering gently. Rinse the nets in the pond

Talk about:

- The differences between the mini-beasts found in the different reserves.
- Water safety
- How polluted the pond might be (see pollution guide).

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Suggested lesson plan for the study of a pond ecosystem

Use in conjunction with the "Fishing" activity sheet

The pond provides a wide range of learning opportunities. This section contains an in depth explanation of the pond ecosystem and suggested lesson plan for a half day field study focusing on sampling and identification.

The pond is an excellent resource, rich in a range of organisms particularly, from March to October.

Aim

To study the ecosystem of a pond

Objectives

- To show the range of organisms that inhabit freshwater
- To understand how organisms fill different niches and are adapted to their environments
- To understand how feeding relationships operate

Values and attributes

• To encourage care and respect for living things

Introduction

What would you expect to find in the pond?

• Many organisms are extremely small but fascinating, so you need to look very carefully.

How will you find out?

- You will need to sample refer to the "Fishing" activity sheet.
- Within the pond there are different places for creatures to live or "zones". Try to sample all the different zones surface, amongst weed, open water and along the bottom, but don't stir up mud or you will not see anything.
- To help focus pupils on observing organisms, discuss the special problems associated with living water. They will find this easier to do if using themselves as reference points e.g. if you had to live under water what would you have problems with?

The main areas are:

- Getting oxygen
- Moving
- · Finding food and avoid being caught



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Suggested lesson plan for the study of a pond ecosystem

Getting oxygen

Strictly speaking, not all animals breathe – breathing involves lungs, but all animals do need oxygen. Mammals and birds breathe –fish and insects do not but still have to have ways of getting oxygen.

What happens to us when we go under water? How do we cope with getting oxygen under water? We could:

- Take a deep breath and come back to the surface to get more. Some creatures do this. Water beetles visit the surface at intervals to collect fresh air. Whales do too but you will not find any in our pond. Insects do not have lungs so the oxygen can enter the body in different places e.g. Midge larvae have breathing tubes and spend time suspended on the surface.
- Take a supply of air down with you like a diver with air cylinders. Snails and beetles do this.



Movement

Water is a denser medium than air. It is more difficult to move through water than air but water supports you. How do we move through water?

• Adopt a streamline shape - so we swim, moving horizontally through

the water presenting a smaller surface area to the water – less restrictive than moving vertically. Top competitive swimmers remove body hair to improve streamlining. Most water creatures are streamlined. Water beetles particularly have smoother outlines compared to land beetles.

• Use our limbs to push against the water. We maximise area to push back with by wearing flippers. This

makes leg movements more effective. Frogs and some newts have webbed feet. Many water insects have limbs which are shaped or fringed with hairs for more effective propulsion.

- Use boats streamlined and using oars with blades to push water back. Several creatures have boat-like shapes and many have specialised oar-like legs to help push them through the water.
- Pushing water out behind helps to propel craft forward. Dragonfly larvae use this method to move rapidly forward in a series of spurts. Water is squeezed out of the abdomen shooting the insect forward during this method of movement its legs are tucked in to improve streamlining.

Suggested lesson plan for the study of a pond ecosystem

Getting food and avoid being caught

As top carnivores we do not have a great problem with this. Possible strategies are:

- Hide Prey can seek refuge in the weeds or the mud. This is common. Note that organisms you collect in trays will seek shelter under whatever bits of weed are available. Likewise predators can lurk in mud and dart out as prey approaches.
- Camouflage
- Speed to avoid predators
- Several have special mouthparts and adapted legs to help them grab and eat prey. Dragonfly nymphs are notable for their special mouthparts, normally tucked under the head which can shoot out and grasp prey a fearsome weapon.

Collect organisms

Refer to the "Fishing" Activity Sheets and collect organisms from the pond.

Ask pupils to use magnifying glasses for observation and identification sheets to try to find out:

• What the organisms are

(Hint: creatures with 6 legs will be insects or insect larvae. However, not all insect larvae have legs)

- How the organisms get their oxygen
- What they might feed on (mouthparts may give a clue)
- How they move

Pupils could be given 1 or 2 organisms to investigate and then share what they find out with the rest of the group.

Look at the pollution guide to see if the pond is polluted or clean

How is the pond habitat different from a stream?

- Organisms living in running water have an additional problem in avoiding being washed away. Also it is more difficult for plants to become anchored and there is less vegetation to either hide amongst or provide food.
- The water is running so the oxygen content is higher.
- If you were investigating a stream you would need to look carefully to spot organisms. Nymphs of various species of mayflies which require high oxygen content are common.

Microhike

An ant's view of the world

Each pair/three will need: A piece of string about 2m long, a magnifying glass and some mini-flags

How to do it:

1. Introduce the activity by saying:

• You are going for a hike in the reserve known as 'The Ground'. This is by far the largest reserve you will visit and you will only have chance to explore a very small part of it. However, on the way you will see some spectacular views and if you are lucky, spot some interesting mini-beasts. The string is the route you have to follow and the magnifying glass is to help you look at the scenery and spot mini-beasts.

2. Give out the equipment

- The string is for laying on the ground to mark a route.
- The magnifying glass is for looking closer.
- The flags are for marking interesting features on the way.

3. Exploring the ground

- Tell the group to find an interesting looking spot to lay their string on the ground.
- Next they should lie down on their stomachs at one end of the string and slowly crawl along the string looking through the magnifying glass with their eyes no more than a few centimetres off the ground.
- They should use the mini-flags to mark interesting features on the way.

- What they saw along the route what do their flags mark?
- Was the scenery beautiful?
- Did they spot any mini-beasts?





Under 7s

Looking at the creatures at our feet

Each small group will need: Two or three small pots, a magnifying glass, a pooter

How to do it:

1. Introduce the activity by saying:

• Mini-beasts are shy and retiring and don't like to be seen by people. They tend to hide away in places where there is good cover such as under stones and logs.

2. Give out the equipment

- The pots are for collecting larger mini-beasts in they should collect no more than 3 or four per pot. (Be aware that creatures of different species could eat each other).
- The pooter is for sucking up smaller mini-beasts they suck through the shorter pipe with the covered end and place the longer pipe with the open end over the insect.
- The magnifying glass is for taking a closer look.

3. Exploring the ground

- Give 20 minutes to explore "The Ground".
- See how many mini-beasts they can find.
- They are allowed to collect one of each type of mini-beast but must carefully put back any stones or logs that they move.

4. Return to Camp

• After 20 minutes blow the whistle as a signal for them to return to the Camp.

5. Counting Favourites

• How many different mini-beasts they have found and to decide which is their favourite mini-beast.

6. Finally, they should carefully return all the mini-beasts to where they were found

Please return all magnifying glasses to the box - these can easily start a fire in hot dry conditions.

- How many different mini-beasts each group has found?
- Where the best places were to find mini-beasts, and why?
- Which was the group's favourite mini-beast and why?
- Once used please wipe pooter tubes and return to box.



Trophies

7s & over



Each small group will need: The same equipment as for mini-beast hunting, Woodland Trail Guide, pencils, a clip board and **mini-beast record sheets**.

How to do it:

1. Introduce the activity by saying:

• In times gone by, people used to kill any animals they thought were interesting and have them stuffed to hang on the wall or mounted with pins in display boxes. Today we know that it is better to let the animals live and record what they look like in words and pictures.

2. Give out the equipment

- The pots are for collecting larger mini-beasts in they should collect no more than 3 or four per pot.
- The pooter is for sucking up tiny mini-beasts they suck through the shorter pipe with the covered end and place the longer pipe with the open end over the insect.
- The magnifying glass is for taking a closer look .

3. Record the minibeasts

- They should record the details of each mini-beast on the **mini-beast record sheet** and attempt to identify them using the keys.
- There is a simple key for children aged 7-11. Older children should use the Woodland Trail Guide.

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4. Finally, they should carefully return all the mini-beasts to where they were found.

Talk about:

- How many different mini-beasts each group has found.
- Where the best places were to find mini-beasts.
- Which was the group's favourite mini-beast and why?
- How easy was it to identify them using the guides?
- Once used please wipe pooter tubes and return to box.

Colliers Wood

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Tree beating

Looking at the creatures that live in trees

You will need: A large white sheet, a tree with branches in easy reach. Each pair or three will need: A pooter, a magnifying glass, mini-beast record sheets, clip board, pencils and the Woodland Trail Guide.

How to do it:

1. Introduce the activity by saying:

- There are many mini-beasts hiding in the tree.
- The best way of looking for them would be to examine each part of the tree with a magnifying glass as this would disturb the mini-beasts the least. Unfortunately there is not time to do that so instead you are going to get them out by giving a branch a shake.
- They must be ready to pounce on anything that falls out onto the white sheet.

2. Give out the equipment

- The pots are for collecting larger mini-beasts in they should collect no more than 3 or four per pot.
- The pooter is for sucking up smaller mini-beasts they suck through the shorter pipe with the covered end and place the longer pipe with the open end over the insect.
- The magnifying glass is for taking a closer look.

3. Get ready

- Stand the group around the tree and place the sheet under a tree.
- Shake the branch when the group are ready to pounce.

4. Collect the beasts

• Using the pots and pooters.

5. Repeat under a different branch

6. Mini-beasts can be recorded by:

- The under 7s counting the different types of mini-beast.
- 7-11 year olds using the mini-beast dial.
- the 11s and over using the Woodland Trail Guide and mini-beast record sheet.

7. Finally, make sure the mini-beasts are released close to the tree

Talk about:

• What they could find and whether they could identify them.

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<u>Colliers</u> Wood

High in the Sky

Looking at the world from a different angle. Each person will need: A mirror

How to do it:

- 1. Introduce the activity by saying:
- Many mini-beasts that live in trees can fly at some stage in their life.
- You are going to see what it feels like to fly by going on a mirror walk.

2. Form a line

• Stand the group in a line with one hand on the shoulder of the person in front and with the mirror just under their chins.

3. Using the mirrors

- They need to take big high steps to avoid tripping practice this first!
- Tell them to look in their mirrors as you lead them through the trees this gives a feeling of flying.

4. What's in a tree?

• Stop under a tree and ask if they can spot anything interesting in the tree using the mirror (they are not allowed to look up).

5. Share your find with the group

• If someone finds something, the rest of the group should see if they can see it by changing the angle of their mirrors.

Talk about:

- What it felt like.
- Whether they spotted any flying mini- beasts.
- Where such beasts might live up and down a tree.

Follow up idea

• Draw the view in your mirror and develop drawings, paintings, collages etc back at school.

Pollution Guide



If you find these organisms there is NO POLLUTION

If you find these organisms but none from group A then there is SLIGHT POLLUTION

If you find these organisms but none from A or B then there is MEDIUM POLLUTION

If you find these organisms but none from A , B or C then there is A LOT OF POLLUTION

If you find no organisms at all then the water is VERY POLLUTED

Make your own mini-beast dial



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Mini-beast Record Sheet

For activities: Trophies, Tree beating, Fishing

Description	Mini-beast 1	Mini-beast 2	Mini-beast 3	Mini-beast 4
Number of legs				
Number of body parts				
Number of wings				
How long is it?				
How wide is it?				
What colour is it?				
How does it move?				
Where was it found?				
What is it?				



Drawing Mini-beasts

For activities: Trophies, Tree beating, Fishing

Mini-beast 1	Mini-beast 2
Mini-beast 3	Mini-beast 4
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Follow up ideas

Write a report

Use your notes to write a report about one of your mini-beasts for the rest of your class to read. Plan your report carefully before starting to write it. What will you include? Why? Illustrate your report. You could make all the reports into a class book to go in your

school library.

Worm home

Make up names

Make up suitable names for your mini-beasts which describe them well (eg. "armour-plated scuttler" for a woodlouse). Cut the top off a large plastic pop bottle. Fill it with layers of sand and soil. Add a few worms. Place leaves on the surface and cover the top of the bottle with net. Look daily to see what happens to the leaves and layers. After a week, return the worms to the place you found them.

Washing up bowl pond

Arrange a few stones and water plants in a washing up bowl. Carefully fill the pond with tap water. Put it outside in a sheltered spot. Visit daily and record any mini-beasts you see.

Visit: www.buglife.org.uk

to find out more about mini-beasts

Investigating Habitats

Investigating Habitats is a set of activities designed to enable people to improve nature observation and recording skills. The suggested activity list is for guidance only and you may pick and combine the activities to fit your needs. The activities are suitable for a wide range of ages

Setting up headquarters

Setting the scene and introducing the activities You will need: A pleasant spot to set up base, close to several habitats and hedgerows, something to sit on if it is damp, a whistle.

How to do it:

1. Tell the group:

- The spot they are in is Record Headquarters and they should report their findings to HQ after each investigation or whenever they hear the whistle.
- They are going to record some vital statistics about plant life and habitats around them.
- Discuss what they consider to be trees, which are shrubs and which are plants.
- You are now going to take them on a tour of the study area you are going to investigate in more detail.

2. The work area

• Take them on a tour of the boundary of the area they are to work in.

- Safety issues see Safety in Groups Guidelines
- The equipment they will use
- Looking after the area and the plants and animals found there.



Surveying the Area

Quadrat Survey

A quadrat is normally a square frame or PE hoop, which is thrown at random in order to investigate plant species growing within a certain area. Choose several different habitats, eg: beneath the tree canopies of different trees; woodland/heathland; water meadows/mown grass round lakes

Each small group will need: A hoop, clipboard, pencil, paper and Woodland Plant Identification Guide.

How to do it:

1. Introduce the activity by saying:

• In the last 40 years, in Britain, we have lost 95% of our wild flower meadows, 50% of our ancient woodlands and 50% of our fens and wet valleys.

2. Give out the equipment

3. Survey the chosen area:

• Tell the group to throw their hoop onto one of the areas named above. Wherever it falls, inspect just what is growing within the area covered – ignore everything else.

4. Compare the different areas

- You can then compare two or three different areas.
- You could pick one or two species to look out for (e.g. clover), or you could look at the percentage ground cover of different types of plants (using identification guides to help you.) Use squared paper with quadrats drawn to scale – colour in the area represented by each plant when you get back to school and make a key. Your results could be shown as a pie chart.
- You may want to make 10 throws, then record the different species identified within each quadrat. Count the number of times the same species is recorded in one location. Show your results as a bar chart.

Talk about:

- Which areas encourage biodiversity?
- Which do not?
- What could be done to increase the variety of life in these areas?

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Surveying the Area

Transect Survey (Footpaths)

You will need: A long rope, tape measure, clipboard, pencil, Transect recording sheet

How to do it:

1. Introduce the activity by saying:

• Footpaths become wider and wider as people walk along the edges of the path. This tramples the plants growing there and often causes soil to be washed away from paths in heavy rain. Always keep carefully to paths to avoid scarring the countryside.





• Investigate a footpath through an area of woods. Stretch a long rope between two points on the ground. Record what is growing at 50cm intervals, measure the height of each plant you have found and record your findings on the transect recording sheet on page 21.

- What effects do you think trampling has on the vegetation?
- How could this be avoided?
- Can regeneration take place near to paths? (New plants and trees growing naturally under the older plants.)
- Role play the discussions which might take place between a landowner, conservationists and walkers who are planning a new footpath across a mature woodland area.





Exploring a Hedgerow

You will need: Clipboard, paper, pencils, tape measure, Woodland Plant ID Guide, FSC Tree Guide

How to do it:

1. Introduce the activity by saying:

• Hedges can provide valuable corridors and routes for animals and birds, linking scattered wildlife habitats together. In the last 40 years we have lost 160,000 km of hedges – enough to go round the earth six times.

2. Draw a plan of where the hedge runs.

• What is the function of the hedge? (To mark a boundary, contain stock, a windbreak?)

3. Measure the hedge

• Make a note of how high the hedge is and how wide it is at the bottom. Measure the shadow cast by the hedge. Does one side get more sun than the other? Does this affect the vegetation on each side?

4. Make a list

- Note how many shrubs there are in the hedge and how many plants are growing under or up it. Use the identification sheets to identify the plants and shrubs. Are there any fruits on the shrubs? How are they dispersed?
- Measure a 10m length of the hedge and walk along it to see which is the most common shrub or tree.

5. Look for evidence of animal, bird or mini-beast homes in and under the hedge.

6. Dating a hedge

• It is possible to estimate the age of an old hedge by counting the number of different kinds of trees and shrubs in a 30m stretch. As a very rough guide, you can say that there is one species for every 100 years of the hedge's life. Max Hooper discovered this simple rule after the study of hundreds of old hedges in Britain. It is best to count the species in several 30m stretches if possible, and average the results. Look for large stumps in the hedge to prove that it is old rather than recently planted with lots of species.

30 metres

Talk about:

- The many hedgerows that have been destroyed during this century. Why do you think this has happened?
- How good is the hedge as a habitat for wildlife
- How could it be improved to encourage greater biodiversity?

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Transect recording sheet

Line Transect

Distance	Plant you have found there	Height of plant



New Country

New Country is a series of activities designed to encourage people to use all their senses and to look at the world in different ways. You can pick and choose which activities you do in each section. This activity is suitable for all ages

Setting up base camp

Setting the scene and introducing the activities

You will need: A pleasant spot to set up base, something to sit on if it is damp, a whistle

How to do it:

1. Tell the group:

- They are explorers.
- Imagine you have arrived in a new country that has never been explored before.
- Your sponsors back home have asked you to give a detailed report of the new country.
- The report has to include information collected using some very special and delicate scientific equipment.
- The special and delicate scientific equipment includes:
 - Eyes: These are sensitive to light and record information about shape and colour.
 - Ears: These are sensitive to sounds and record information about volume and pitch.
 - Noses: These are sensitive to chemicals in the air.
 - **Tongues:** These are sensitive to chemicals in solids and liquids, but we will not use our sense of taste today!
 - **Skin:** This is a large and quite bulky piece of equipment that is sensitive to touch and temperature.
 - **Brains:** These are by far the most important pieces of equipment as they are used to understand and store the information collected using the other pieces of equipment.
- The spot you are in is the "Base Camp" and you should report back to the "Base Camp" after all activities and whenever you hear the whistle. You are now going to go on a tour of the country you are later going to explore in detail.

2. Take them on a tour of the boundary of the area they are to work in.

Talk about:

- Safety issues see Safety in Groups Guidelines
- We will be doing some quick checks on the "equipment" before we start

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Cocktail Souvenirs

Making smells

Each person will need: A plastic cup, a stick and some water. It is best to do this activity after lunch and make sure the groups can clean their hands immediately afterwards.

How to do it:

1. Tell the group that smells can often bring back memories of a place.

- Get them to think about how their home smells when they get back from holiday, their school on the first day of term etc.
- They are going to make a "smelly cocktail" as a souvenir of today.

2. Cocktail cups

- Give each person a plastic cup with a little water in. They are to create a smelly cocktail by collecting small amounts of anything that smells interesting and crushing it in the water using a stick.
- They can collect leaves and things off the ground.
- Some things may need 'scrunching' to let the scent escape bark or leaves for example.
- But no berries, mushrooms, prickly plants and no dog mess!!!

3. Sharing the smell

- Think of a name for your cocktail how does it make you feel.
- Sit in a circle and share the smell with the other members of the group.
- Do this as a carousel all pots moving clockwise on a click take a fresh breath between pots!
- Or let the adult helpers do the smell testing moving round the inside of the circle and asking names and checking smells.
- Think of adjectives to describe each perfume you smell. Use these words to write a poem.

4. Before going home empty the pots and give the cocktail to a growing plant!

Talk about

- Different smells that make up the countryside smell not just one big smell
- How the cocktails are good plant food and will breakdown to become fertiliser just as it actually happens

Follow up idea

Colliers Wood

• Make posters for your smelly cocktails with a name and description as if you were selling it.



Prickly Tickly

Using touch to explore the natural world Each pair will need: A blindfold

How to do it:

1. Search for Opposites

- Tell one of the pair they are to search for natural objects that are a pair of opposites eg: prickly and tickly, hard and soft etc. Agree the opposites secretly.
- The other half of the pair is blindfolded and sits or stands in a circle with hands cupped behind. The first child searches around for objects that match the pair of opposites.

2. Return to the circle

• When the first child has found their objects they should place the items separately in their partners cupped hands. The partner has to guess what the secret words are by feeling the things in their hands.

3. Swap Roles

• The pair should then swap over with two new secret words.

Remember to return all your natural objects to the woodland before you leave.

Follow up ideas

- Do the activity back at school, or in another location. Can you find the same or different opposites?
- Use the found objects to make an "opposites" collage.



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Stained Glass Windows

Investigating pattern, colour and texture and the structure of leaves. You will need: Card window shapes of various sizes with holes for windows

How to do it:

1. Searching for materials

- Find yourself a special leaf, preferably large, flat and from the ground.
- Place your leaf on the window and stand in a circle.

2. Hold your window up to the light

- Take note of the position of the sun. (Never look into the sun; stand with the sun behind you).
- Examine your leaf carefully looking at the colours, patterns of veins, holes, etc.

3. Looking through the window

 Once everyone has looked at his or her own leaf pass it to the person on your right to view.

One of Kind

Investigating the unique qualities of each leaf

1. Find a leaf

- Everyone finds a leaf and spends a minute studying it carefully looking for the features that make it unique and recognisable, colours, patterns of veins, holes etc.
- One person should spread all the leaves out in the middle of the circle while everyone turns their backs.

2. Is your leaf unique?

• Everyone turns round again to face the centre of the circle and takes turns to find his or her own leaf again.

3. Swap roles

• Do the same thing again but swap your leaf with a partner before placing the leaf in the circle. Try to find your partner's leaf.

Making Friends

Using the senses of touch and smell

You will need: A flat area with trees Each pair will need: A blindfold

How to do it:

1. Meet the inhabitants

• Tell the group that they are going to meet some of the inhabitants of a new country.

2. Divide the group into pairs

- One person is the Explorer and is blindfolded. The other is the Guide.
- The role of the Guide is to safely direct the blindfolded Explorer to a tree telling them where and when to be careful with their steps (holding one elbow is a good way).
- Explorers should lift their feet quite high and step down firmly
- Tell the Guide to gently turn the Explorer round a few times. Then, after making sure that they are not dizzy, lead them to a nearby tree.

3. Exploring the tree

- Use hands and noses to explore the base of the tree, the trunk and up as far as they can reach
- When they feel that they know the tree, the Guide should spin the explorer round, in the same way as before, and lead them back to the place where they started.

4. Finding the tree

- The blindfold should then be removed and the Explorer should try to see if they can find the tree again.
- When they do, they should give the tree a hug.

5. The Explorer and Guide should swap roles

- How did they recognise their tree?
- Was it easy or difficult?





The Colour Palette

Exploring the wonderful world of colour

You will need: a bag to collect things in, a clipboard, pencil, crayons and paper.

How to do it:

1. Nature is full of colour.

- See how many different coloured objects that you can find in 10 minutes.
- If the colour cannot be collected it could be marked using crayons.

2. Exhibit your colours

• Make an exhibition of your objects putting them in the same order as the colours of the rainbow:

red, orange, yellow, green, blue, indigo and violet.

3. Write a rhyme

- Make up a rhyme to help you to remember the order of the colours of the rainbow.
- Try writing out part of your rhyme under your rainbow using natural objects.

Outlines

Exploring shape

You will need: your eyes and the outlines check list.

How to do it:

1. See if you can find natural objects with the following shapes:



2. Exhibit your finds

 Frame your exhibition using, for example, stones or weaving together bits of twig and wood.

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Outlines check list

See if you can find the following shapes. The shapes may be found anywhere, for example as parts of trees, stones and flowers. Either collect the object and exhibit it in your room at Nature's Gallery or make a note of where you found it and show a friend.



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Colour Check

Each person will need: Colour card index, sticky cards.

How to do it:

1. Ask everyone to look around them and tell you what colours they can see

- Which colour can they see most of? (usually green and brown).
- Get them to think about if there is just one green or many different shades.

2. Collecting shades of green

- Give them a sticky card.
- Collect as many shades of green on their colour card index.
- Pick small amounts from plants or from the ground.
- Stay away from plants with berries or that can prickle.

3. How many shades have they collected?

- Put the sticky cards on the ground and compare all the colours.
- You may want to use the colour card index to swatch check colours!

4. Cover the cards with the tape to keep them safe

5. Repeat this with shades of brown, bright colours or light colours

Talk about:

- There are lots of different shades of green.
- How artists have used colour to paint the natural world. Look for many shades of one colour in a painting.
- Why plants are green they have a special agent helping them called "Chlorophyll" that takes out energy from light to make plant food and also reflects back the colour green!





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Magic Cameras

Sharing great pictures

To view the natural world as a whole can be overwhelming, and it is difficult to see the small details that make each area unique. The idea of this activity is that children focus their attention on one small part of their surroundings and scrutinise it closely. You will need: A whistle.

How to do it:

1. Explore the Country

- Tell the group that they have ten minutes to explore the 'country' on their own and find 3 beautiful places or things to show a friend.
- They must return to base camp when the whistle is blown.
- Divide the group into pairs.
- One person is the Photographer and the other the Camera.

2. The Photographer

• Stands behind the Camera and places their hands on the Camera's shoulders.

3. The Camera

- Shuts their eyes (shutters) and the Photographer guides the Camera to something interesting.
- To take a photograph the Photographer taps the Camera once on the shoulder (eyes open) and then, ten seconds later, taps twice (eyes closed).
- Alternatively they can cover the Camera's eyes with their hands from behind and open the shutter by opening their hands briefly.

4. The Photographer

• Takes 3 photos of different places and then swaps places with the Camera.

- The "photographs" they have taken and why.
- How a camera works.

